

ABSTRACT OF THE DISCLOSURE

5 A system for separating particles from a contaminated liquid stream includes an apparatus for mixing the liquid with one or more separation enhancement additives and gases. A pressure reducing device having a flow restrictor element within an enlarged tube receives the mixed liquid and creates bubble laden floccs by reducing the pressure of the liquid stream. The pressure reducing device empties into a bloom chamber of a flotation tank, where the bubble laden floccs are directed upwardly to an upper portion of the flotation tank. The flotation tank is configured such that the bubble laden floccs circulate within the upper portion of the flotation tank until they float to the upper surface, while decontaminated liquid flows to a lower portion of the tank for removal. A skimmer removes the floated contaminated floccs from the upper surface of the flotation tank into a dewatering apparatus.

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